IN THE SPECIFICATION:

Please amend the specification on page 4, before line 23, as follows:

According to the invention, a light diode arrangement with a reflector is provided, comprising a sub-mount on which a light-emitting diode chip is mounted, and a reflector aligned at the sub-mount and which comprises a reflector surface located in the beam path of the light-emitting diode chip, wherein the sub-mount comprises a blind hole into which the light-emitting diode chip is inserted and comprises a paraboloidal reflector surface above the blind hole in whose focal point or focal line the center of the surface of the light-emitting diode chip is located, the reflector is formed by a solid body formed of a transparent material and comprising a small irradiation surface opposing the light-emitting diode chip and a large radiation surface opposing same at a distance, between which a lateral surface forming the reflector surface extends, and that the sub-mount comprises an opening above the blind hole into which the reflector body is inserted with the ~~radiation~~ irradiation surface first so that its reflector surface forms a continuation of the reflector surface of the sub-mount.

To facilitate manufacture, in a preferred embodiment, the reflector body is a rotational-symmetric body in whose axis the LED chip is arranged.

To improve the intensity of reflected light, in another preferred embodiment, the reflector surfaces of the sub-mount and the reflector body are each formed paraboloidal.

Further, the reflector body preferably is held by a ferrule centered on the sub-mount.

In another preferred embodiment of the invention, the reflector surface of the reflector body is formed by four lateral surfaces adjoining one another, of which at least two opposing lateral surfaces generate a ~~paraboloidal~~ parabolic intersecting line on a plane vertically intersecting the lateral surfaces and the LED chip, wherein the four lateral surfaces

and planes vertically intersecting said plane form lines of intersection which perpendicularly intersect one another.

Said two ~~paraboloidally~~ parabolically formed lateral surfaces of the reflector body may have an extension transversely to the ~~paraboloidal~~ parabolic extension that is much larger than the respective dimensions of the other lateral surfaces of the reflector body and that the incident surface of the reflector body is opposed by a plurality of adjoining LED chips that are held on the reflector body by means of their sub-mounts.

To enable the construction of specific illumination devices, in another preferred embodiment, the reflector body is a circular disc or a sector of a disc that has a circular opening in the center, said opening being delimited by an irradiation surface, and the disc or the disc sector has an outer periphery that is delimited by a radiation surface, wherein the irradiation surface and the radiation surface have cylinder surfaces being axially parallel, and the lateral surfaces connecting same form ~~paraboloidal~~ parabolic lines of intersection with an axial intersecting plane, that approach one another in the direction towards the center of the disc or disc sector, and that the irradiation surface is opposed by a plurality of adjoining, star-like aligned LED chips that are held on the reflector body by means of their sub-mounts.

To improve the reflectivity of the device, the reflector surfaces of the reflector body are polished.

In order to improve the optical properties, the space between the LED chip and the irradiation surface of the reflector body is filled with a transparent, cured liquid plastic.

Please amend the specification on page 5, lines 20 through 23, as follows:

Fig. 6 shows an arrangement in which the reflector body is delimited by four lateral surfaces, which together in sectional planes perpendicular to the LED chip form right angles, but have a ~~paraboloidal~~ parabolic curvature in a plane parallel to the vertical on the LED chip.

Please amend the specification on page 6, lines 21 through 31, as follows:

In order to extend the reflector, according to the invention a reflector body 8 consisting of transparent plastics (e.g. PMMA or PC) or clear glass is inserted into the reflector opening of the sub-mount 1, said reflector body when being inserted aligning precisely (i.e. by precise within some μm) in the axial direction of the reflector 7 within the sub-mount 1. A transparent liquid plastic material 9 is filled between the LED chip 3 and the reflector body 8, said plastic material filling the entire free space of the sub-mount 1 in a bubble-free manner. Light from the LED chip 3 which is incident not onto the sub-mount reflector 7 but onto the ~~paraboloidal~~ parabolic surface 10 of the reflector body 8 has an angle to the surface of incidence that is so small that it is totally reflected. Even without a metallization of the reflector body 8 does a 100% light reflection take place.

Please amend the specification on page 8, lines 22 through 26, as follows:

The reflector body may also be designed with a geometry acting as a beam former only in a single space direction in that it is linearly extended while maintaining a ~~paraboloidal~~ parabolic cross section in a direction orthogonal to the cross section so that a respectively profiled disk or rail is provided, or by closing same into the shape of a toroid forming a disc provided with a central opening.

Please amend the specification on page 8, lines 27 through page 9, line 6, as follows:

Figure 4 shows a reflector geometry that consists of a flat disc 8a, with Fig. 4a showing a cross section and Fig. 4b showing a top view. It can be recognized that at the edge where the two surfaces 15 that are ~~paraboloidally~~ parabolic bulged in cross section approach one another, several LEDs are arranged adjacently through their sub-mounts 1 so that they may together radiate into the reflector body 8a: The radiating end face 11a opposing said edge then appears as a light band which may be have an extension transversely to a parabolic extension of the reflector body 8a that is much larger than the respective dimensions of the other lateral surfaces of the reflector body 8a. It is self-evident that in this case the openings of the sub-mounts 1 are not formed rotationally-symmetrical but comprise two reflection surfaces opposing one another, which together with an imaginative section place extending perpendicular thereto form ~~paraboloidal~~ parabolic lines of intersection.

Please amend the specification on page 9, lines 7 through 23, as follows:

The embodiment according to Fig. 5a and 5b can e.g. be used as an all-around beacon for maritime applications or for the illumination of only one room plane in living rooms or office rooms. In this embodiment, according to Fig. 5b the reflector body 8b is a disc having an opening 16 in its interior, which is delimited by a cylindrical light entrance surface. The upper and lower lateral surfaces of the reflector body 8b in the drawing have, according to Fig. 5a, such a curvature that together with an axial intersecting plane they form mirror-inverted, ~~paraboloidal~~ parabolic lines of intersection 15 that approach one another in the direction towards the edge of the opening 16. At this edge a plurality of LED chips are

arranged through their sub-mounts in juxtaposition in a star-shaped alignment, comparable to the embodiment of Fig. 4b, and therefore they radiate radially outwardly into the reflector body 11b. LEDs of different colors may be combined to form white light or any other color, or light of different colors may be radiated from the cylindrical outer peripheral surface 11b of the reflector body, as is required in many practical applications, without color filters having to be used that attenuate the light intensity of the beacons operated with light bulbs. It is self-evident that in this embodiment the sub-mounts 1 do not have any rotational-symmetrical recesses but are designed in a manner as explained above with reference to the embodiment of Fig. 4a and 4b.

Please amend the specification on page 9, lines 24 through 32, as follows:

For reasons of product design or because of specially predetermined installation conditions it might be required to form the rotational-symmetric reflector bodies and sub-mounts according to Fig. 2 and 3 by reflector bodies with square cross sections perpendicular to the reflector axis. The rotational paraboloid then becomes a reflector body 8c, whose four lateral surfaces 15 are curved parabolically in one plane. Fig. 6 shows this structure with different cross sectional surfaces in different heights of the reflector body 8c. In this figure, Fig. 6a shows a section normal to the LED chip, showing the parabolic shape of the reflecting surfaces 15 of the reflector body 8c. Fig. 6b shows a cross sectional view of the sub-mount 1 in a plane in parallel to a carrier substrate 4. Fig. 6c shows a cross sectional similar to Fig. 6b view in a height where the reflector body 8c is inserted in the opening of the sub-mount 1, whereas Figs. 6d and 6e show respective sectional views clearly showing a square cross section of the reflector body 8c at different height positions. Since the manufacture of tools

having surfaces that do not have rotational-symmetric surfaces is significantly more complex, this design will only be used under specially predetermined ancillary conditions.